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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,882	03/13/2002	Irwin Hei-Wai To	HYAIR:59529	5396

24201 7590 06/25/2003

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EXAMINER

GILMAN, ALEXANDER

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 06/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/099,882

Applicant(s)

TO ET AL.

Examiner

Alexander Gilman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13, 16- 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Beinhour et al.

With regard to claims 1,3, 8, 12, 16, 17, and 20, the admitted prior art discloses (Fig. 1 of the current application) an electrical connector, comprising:

- an one-piece cup-shaped connector shell (12) with an outer radial connector flange (14);
- an insulating plug (16) made of glass;
- a plurality of connector pins (20); and a plurality of electrical cables (not shown).

The admitted prior art does not disclose

tubular risers;

insulating tubing;

Beinhour et al disclose tubular risers (46) and insulating tubing (52).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the admitted prior art with the risers and insulating cross-linked tubing, as taught by Beinhour et al, to dependably seal the connection of the pin and the cable.

The admitted prior art also specifically does not disclose the cup-shaped connector shell made as an one-piece part with outer flange.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the cup-shaped connector shell made as an one-piece part with outer flange,

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since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

With regard to claims 4-7, 18, and 19, the admitted prior art discloses the connector shell, configured to increase a distance of a potential current leak, is formed from corrosion-resistant material. With regard to claims 2, 11, 12, 22, the admitted prior art when modified by Beinhaur et al discloses (Beinhaur et al, Fig. 4) outer layer (52) of insulating cross-linked tubing (col. 6, lines covering portion of the riser (46), the connector pin (16, 14), and a corresponding cable (70).

With regard to claims 9 and 21, the admitted prior art when modified by Beinhaur et al discloses (Beinhaur et al) discloses that the tubular risers are formed from ceramic material.

With regard to claim 10, the admitted prior art when modified by Beinhaur et al discloses (Beinhaur et al) that the connector pins comprise a solder cups (14).

Claims 14, 15, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Beinhaur et al as applied to claim 2 above, and further in view of Tharman. The admitted prior art in view of Beinhaur et al discloses all of the limitations except for a two layers of insulating tubing.

Tharman (U 4,233,534) discloses (Fig. 6-9) two layers (64, 67; col. 7, lines 10-12) of insulating tubing. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Broussard's-Beinhaur et al the connection of the pin and the cable with insulating cross-linked tubing, as taught by Tharman, to further improve sealing the connection of the pin and the cable.

Response to Arguments

Applicant's arguments filed 04/14/2003 have been fully considered but they are not persuasive.

Rejections based on Broussard (US 6,165,013) have been dropped.

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With regard to claims 1-8, 11, 12, 16-20, and 22, Applicants argue that the secondary reference (Beinhauer et al) does not disclose the tubular risers being extended from an end of the connector shell.

However, in the rejections, the secondary reference (Beinhauer et al) was recited for the risers, not for their disposition. It was assumed that the risers when introduced into the prior art connector were extended from an end of the connector shell.

Also, Applicants argue that the secondary reference (Beinhauer et al) provides sealant preforms 56, 58 within heat recovering tubing, while the invention does not depend on seals at interface between the wire, risers and heat shrunk tubing.

Firstly, the respective claims do not claim that the additional sealant preforms are not necessary.

Additionally, Beinhauer et al the sealant preforms 56, 58 are modifiers to improve the sealing and their elimination, is an obvious expedient since it has been held that omission of an element and its function in a combination where the remaining elements perform the same functions as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184. In Beinhauer et al, sealing with heat recovering tubing only, without additional sealant preforms, is possible.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

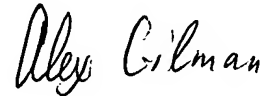
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Gilman whose telephone number is (703) 305-0847. The examiner can normally be reached on Monday-Friday, 10:30 a.m. - 8:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

Alexander Gilman

A handwritten signature in cursive script that reads "Alex Gilman".

June 23, 2003